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10/579,516	05/16/2006	Kevin John Beaumont	039-212	8429

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EXAMINER	
BAINBRIDGE, ANDREW PHILIP	
ART UNIT	PAPER NUMBER
3754	
MAIL DATE	DELIVERY MODE
11/10/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,516	BEAUMONT, KEVIN JOHN	
	Examiner	Art Unit	
	ANDREW P. BAINBRIDGE	3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7 and 10-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7 and 10-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5, 7 and 10-13 are rejected under 35 U.S.C. 112, second paragraph, as **being indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the "means for supplying liquid under pressure" of claim 1 is the same "liquid supply means" of claims 2, 4-5 and 10-13. For the sake of examination efficiency, the claims were assumed to mean the same thing.

3. Claims 1 and 4-5 are rejected under 35 U.S.C. 112, second paragraph, as **being indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There are really three embodiments to this invention: A: Figure 1, the liquid supply means is a pressurized tank, B: Figure 2, the liquid supply means is either the pulsation pump alone or the pulsation pump and the pump dampener and the flow control valve, and last C: Figure 2, the liquid supply means is a smooth output gear pump. It is unclear after reviewing claims 1 and 4-5 whether the "liquid supply means" of claim 1 includes only a pulsation pump 10 alone or the pulsation pump 10 and the dampener 12 and the flow control valve 14.

4. Claims 1-5, 7 and 10-13 are rejected under 35 U.S.C. 112, second paragraph, as **being indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. After reviewing the first "means for" clause of claim 1 (line 1), it is unclear where the "means for" clause ends, so it is unclear whether

a "batch dispensing valve" and a "digital mass flow meter" are positively recited as structural limitations of the claims. For the sake of Examination efficiency, these two elements were interpreted to both be positively recited elements of the claim and that the "means for" clause only related to "supplying liquid under pressure".

5. Claims 1-5, 7 and 101-13 are rejected under 35 U.S.C. 112, second paragraph, as **being indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "by way of" (claim 1, line 2) appears to be used to imply that the liquid supply means flows past a digital mass flow meter prior to reaching the "batch dispensing valve" later downstream, but the phrase "by way of" can be interpreted to have other meanings and should be replaced with a more clear arrangement of the three key elements: the liquid supply means upstream from a digital mass flow meter upstream from a batch dispensing valve. For the sake of Examination efficiency, the phrase "by way of" was interpreted to mean that the digital mass flow meter was upstream from the batch dispensing valve.

Claim Objections

6. Claims 1-5, 7 and 10-13 are objected to because of the **following informalities**: in claim 1, lines 2 and 4, the "meter" of line 4 appears to refer to the digital mass flow meter of line 2, but it is unclear if it refers to a different meter. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a)** as being unpatentable over US 2003/0056695 (Macklin et al.).

10. Mackilin in figure 1 discloses a storage vessel 12 for a fibrous liquid that is pumped out by a pulsation pump 14 that is upstream from a pulsation dampener 16 that is upstream from a flow metering device 18 that is upstream from a batch dispensing valve 20 that dispenses into a receiver vessel 22, the entire process controlled by a computer system that starts and stops the pump 12 based on the information provided by the metering device 18 that closes the dispensing valve 20 at the appropriate time (paragraph 0084). Although Macklin does not teach that the metering device is a digital mass flow meter, it would be a matter of an obvious design choice. It would be obvious to one of ordinary skill in the art to select a digital mass flow meter for the metering device because the meter must send information to a computer which ultimately needs digital and not analog information in order to better control the batch dispensing valve.

11. **Claims 1-4, 7 and 14 are rejected under 35 U.S.C. 102(a)** as being anticipated by US 2003/0098069 (Sund et al.).

12. Sund in figures 1-11 discloses a container 518 that is pressurized 550 in order to ensure that the fluid filled bag 518 is properly and consistently pressurized, the fluid bag 518 dispensing its contents by a metered pump 511 that then traverses two pressure sensors and a coriolis mass flow meter 512 that measures the mass of fluid flow and sends it (inevitably) as a digital signal to the computer controller 514 which keeps the information in its memory (paragraph 0073) via a software program that controls the pressure control valve 550, the metered pump 511 as well as a liquid control valve 51 located directly upstream of the coriolis mass flow meter 512. Although Sund is silent whether the coriolis mass flow meter is digital in its operation or whether it merely converts its analog input into digital signals for the computer controller to interpret, it is a matter of an obvious design choice. It would be obvious to one of ordinary skill in the art to select a digital mass flow meter for the metering device because the meter must send information to a computer which ultimately needs digital and not analog information in order to better control the batch dispensing valve.

13. **Claim 10-13 is rejected under 35 U.S.C. 103(a)** as being unpatentable over Macklin in view of US 5,433,342 (Luro).

14. Macklin in claims 1 and 4 has all of the elements of claims 10-13 except for the liquid supply means having a pump that provides a smooth output, preferably with a gear pump. Luro in figure 1 teaches a storage tank for fluid 1 with a line that leads to a gear pump 4 that provides smooth laminar flow output such that the accuracy of the flow

measurements from the pump are very reliable (col. 3, lines 35-50). It would be obvious to one of ordinary skill in the art to adapt the gear pump of Luro to the Macklin device because Luro's gear pump provides a reliable and accurate way to assure that the correct amount of fluid is dispensed every time.

Response to Arguments

15. Applicant's arguments filed 7/6/2009 have been fully considered but they are not persuasive. Applicant argues that 1) the flow meter of Sund is not digital and 2) that an adequate reason to combine Macklin and Sund was not provided, and last 3) that the rejection of the claims for failing to provide an example of a pump providing a smooth output was improper because a gear pump was provided as an example in the specification provided by the Applicant. First, the examiner points to the specifications of both Sund and Macklin where the mass flow meters must be at least send out a digital signal for their computer controllers to receive the flow meter's information, and so the only question is whether the mass flow meter was digital in its operation or analog in its operation but that it somehow coverts its analog data into a digital stream for the computer controller. Regardless, it is a matter of an obvious design choice to select a digitally operated mass flow meter because that would avoid the inaccuracy of changing analog data to digital data and also digital mass flow meters are faster responding, allowing data streams of very small increments. Next, the combination of Sund and Macklin has been avoided in this office action in order to better address each individual embodiment of the Applicant's device. Finally, the Examiner agrees with the Applicant that the provided specification has good examples of a pump providing

smooth output, such as a gear pump, and so the Examiner's initial 112 rejection relating to the "smooth output" is hereby withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW P. BAINBRIDGE whose telephone number is (571)270-3767. The examiner can normally be reached on Monday to Thursday, 9:30 AM to 8:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. P. B./
Examiner, Art Unit 3754

/Kenneth Bomberg/
Primary Examiner, Art Unit 3754